

TASK SWITCHING WITH
STATE PRESERVATION FOR PROGRAMS
RUNNING ON AN ELECTRONIC DEVICE

5 ABSTRACT OF THE INVENTION

A method and system providing switching between a plurality of installed programs in a computer system. The computer system may be a palm-sized computer system or personal digital assistant (PDA). The method and system for switching between programs reduce memory usage by preserving the state of a program as a context packet. Users running a first program, change to using a second program, and return to using the first program at the place where they had left off, even though the first program stops running and relinquishes memory that it has utilized. Returning to the first program is done by touching a single button, thereby providing significant ease of use. Furthermore, a user can jump between programs in a random fashion and have the option of resuming a program at the place where he left off, or restarting the program anew.

Embodiments include a jump function comprising the steps: (1) determining a jump program that is to be the next program to be run, possibly from a plurality of possible choices; (2) creating input data for the jump program based on data in the current program; (3) storing the program state of the currently running program into a context packet and saving the context packet to memory; (4) releasing temporary memory that is used by the program, so as to allow other programs to use the memory; (5) calling the jump program with the created input data as input and terminating the currently running program.